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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,932	10/10/2001	Yuuichi Hashimoto	HITA.0108	4831

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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT	PAPER NUMBER
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2674

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DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,932

Applicant(s)

HASHIMOTO ET AL.

Examiner

Kimnhung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This application has been examined. The claims 1-7 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebiguchi et al. (US patent 6,433,764) in view of Whetten (US patent 5,062,690).

Hebiguchi et al. disclose in figures 1-3 that a liquid crystal display device comprising a liquid crystal (42); and two substrates (40, 41) opposed to each other with the Liquid crystal interposed in between; a plurality of drain signal lines (51) that cross the plurality of gate signal lines (50); pixel regions each enclosed by two gate signal lines adjacent to each other and two drain signal lines adjacent to each other (see figure 22); a switching element (thin film transistor T) that is provided in each pixel region and driven by a scanning signal supplied from one of the two gate signal lines that define the pixel region; a pixel electrode that is provided in each pixel region and supplied via the switching element with a video signal from one of the two drain signal lines that define the pixel region (see figures 1-2, column 8, lines 18-46); an insulating film (58, see column 8, lines 47-48). However, Hebiguchi et al. do not disclose a repair conductive

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layer formed in each of the plurality of drain signal lines when viewed perpendicularly with the insulating film interposed in between, or a repair conductive layer formed at a position closer to the one substrate than the insulating film. Whetten discloses in figures 7A-7B a liquid crystal display having scan line and data line comprising a pattern redundant data line metallization 18''a and 18''b (see column 7, lines 56-61 and column 8, lines 48-60) and when viewed perpendicularly with the insulating film interposed in between. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of using the a pattern redundant data line metallization as taught by Whetten into the display system of Hebiguchi et al. because this would for providing an open circuit and that may be closed by a laser-fusible link to crease a shut around a selected scan and data line crossover location (see abstract). From the claims above, it would have been obvious for Hebiguchi et al. and Whetten 's system to have a repair conductive layer formed at a position closer to the one substrate than the insulating film as claimed since such a modification would have involved a mere change in the position of a system. A change in position is generally recognized as being within the level of ordinary skill in the art, absent unexpected results.

See In re Japikse, 86 USPQ 70 (CCPA 1950).

3. Claims 2-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebiguchi et al. (US patent 6,433,764) and Whetten as applied to claims 1 and 4 above, and further in view of Komiya et al. (US patent 6,456,013).

Hebiguchi et al. and Whetten disclose every feature of the claimed invention as disclosed above, excluding at least one of the plurality of drain signals having melt-formed located on both sides of the disconnected portion and penetrate the insulating film. Komiya et al. disclose in figure 5A that a patterns of active layer formed in subsequent process by melting of a-Si film to form a P-Si film (see column 9, lines 32-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of using the melting of a-Si film to form a P-Si film as taught by Komiya et al. into the device system having data signal of Hebiguchi et al. and Whetten because this would form the active layer of a switching TFT and prevent generation of leak current in the switching TFT (see abstract).

Response To Arguments

4. Applicant's argument filed on 6-12-03 has been fully considered but they are not persuasive in view of new ground rejection.

Applicant argues that JP'294 does not a repair conductive layer formed so as to be contained in each of the plurality of drain signal lines when viewed perpendicularly with the insulating film interposed in between, or a repair conductive layer formed at a position closer to the one substrate than the insulating film is so as to be contained in each of the plurality of drain signal lines when viewed perpendicularly. However, this argument is not persuasive due to the teachings of combination of Hebiguchi et al. and Whetten as disclosed above.

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Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimnhung Nguyen
December 3, 2003



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**